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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/535,640

05/20/2005

Toshio Abe

OGOSH32USA

7724

270 7590 03/31/2008

HOWSON AND HOWSON
SUITE 210
501 OFFICE CENTER DRIVE
FT WASHINGTON, PA 19034

EXAMINER

BASICHAS, ALFRED

ART UNIT

PAPER NUMBER

3749

MAIL DATE

DELIVERY MODE

03/31/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/535,640	Applicant(s) ABE, TOSHIO	
	Examiner Alfred Basichas	Art Unit 3749	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 January 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 9-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 9-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1 and 9-23 are rejected under 35 U.S.C. 102(b) as being anticipated by Whitelaw (1,567,404), which shows all of the claimed limitations including, among other things,

1. A panel radiator, comprising an oblong radiation panel body (see at least fig. 1); and an oblong steam generation unit A that has a length shorter than a length of said radiation panel body and that is located on a lower part of said radiation panel body (see at least figs. 1,2), said steam generation unit having a combustion unit 14 and a heat exchange unit 2, said combustion unit adapted to directly heat a liquid working fluid (see at least page 1, lines 61-67); left and right steam introduction pipes A,B on an upper end of said steam generation unit respectively coupled with a lower end of left and right steam introduction headers of said radiation panel body, and a heat pipe constituted by the steam generation unit and panel body upon depressurization (Whitelaw's steam generation unit and panel body are subject to vacuuming and depressurization, which constitutes the heat pipe principle in the same way as applicant's invention).

9. A panel radiator according to claim 1, wherein one of said left and right steam introduction headers opens into a lower end of said radiation panel body, and the other opens into an upper end of said radiation panel body (see at least figs. 1,2).

10. A panel radiator according to claim 9, wherein said radiation panel body

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includes a plurality of tubular panel plates in communication at both ends (see at least figs. 2,3).

11. A panel radiator according to claim 10, wherein said radiation panel body includes a pair of front and back panel plates (see at least figs. 2,3).

12. A panel radiator according to claim 11, wherein a radiation fin is provided between said pair of front and back panel plates (see at least figs. 2,3).

13. A panel radiator according to claim 12, wherein a radiation fin is provided on the front and back of said panel plates (see at least figs. 2,3).

14. A panel radiator according to claim 13, wherein said steam generation unit is rectangular and said combustion unit is provided at one end of the rectangular steam generation unit to permit a pressure difference to be formed in said steam generation unit based on a thermal gradient (see at least figs. 1,2).

15. A panel radiator according to claim 1, wherein said radiation panel body includes a plurality of tubular panel plates in communication at both ends (see at least figs. 2,3).

16. A panel radiator according to claim 15, wherein a radiation fin is provided on the front and back of said panel plates (see at least figs. 2,3).

17. A panel radiator according to claim 15, wherein said radiation panel body includes a pair of front and back panel plates (see at least figs. 2,3).

18. A panel radiator according to claim 17, wherein a radiation fin is provided on the front and back of said panel plates (see at least figs. 2,3).

19. A panel radiator according to claim 18, wherein said steam generation unit is rectangular and said combustion unit is provided at one end of the rectangular steam generation unit to permit a pressure difference to be formed in said steam generation unit based on a thermal gradient (see at least fig. 1,2).

20. A panel radiator according to claim 1, wherein said radiation panel body includes a pair of front and back panel plates (see at least figs. 2,3).

21. A panel radiator according to claim 20, wherein a radiation fin is provided between said pair of front and back panel plates (see at least figs. 2,3).

22. A panel radiator according to claim 21, wherein said steam generation unit is rectangular and said combustion unit is provided at one end of the rectangular steam generation unit to permit a pressure difference to be formed

in said steam generation unit based on a thermal gradient (see at least fig. 1,2).

23. A panel radiator according to claim 1, wherein said steam generation unit is rectangular and said combustion unit is provided at one end of the rectangular steam generation unit to permit a pressure difference to be formed in said steam generation unit based on a thermal gradient (see at least fig. 1,2).

Response to Arguments

3. Applicants' arguments with regard to the rejected claims have been considered, but are deemed moot in view of the new grounds of rejection necessitated by the amendment to the claims requiring a liquid working fluid.

Conclusion

4. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alfred Basichas whose telephone number is 571 272 4871. The examiner can normally be reached on Monday through Friday during regular business hours.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Tech Center telephone number is 571 272 3700.

March 31, 2008

/Alfred Basichas/
Primary Examiner, Art Unit 3749